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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CLASS I PERMIT

COMPANY: **B.H.P. Copper**
FACILITY: **Pinto Valley Unit**
PERMIT #: **1000605**
DATE ISSUED: **May 30, 2001**
EXPIRY DATE: **May 30, 2006**

ABSTRACT

This Class I permit is issued to B.H.P. Copper, Pinto Valley Unit, the Permittee, for operation of their mining, milling, and copper leaching operations located 8 miles west of Miami, Arizona off Highway 60.

The copper ore, mined from the open pit mine, is crushed and concentrated in the crushing and milling units. The moly concentrate, separated out by the froth flotation process, is dried in the moly drying unit. The copper concentrate is pumped eleven miles through a pipeline to a filter plant near the town of Miami where the moisture content of the concentrate is reduced to approximately ten percent. Leaching operations are also performed to capitalize on the ore which is not processed in the crushing and concentrator circuit because of its lower copper content. The leachate, which contains copper in solution, is processed in a solvent extraction plant before being transferred to the electrowinning tankhouse. The electrowinning process recovers copper metal from the solution.

Air emissions, counted towards major source applicability determinations, occur at the primary crushing unit, fine crushing unit, milling unit, moly concentrate drying unit, and the boilers. This permit is issued in accordance with Title 49, Chapter 3 of the Arizona Revised Statutes. All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code R18-2-101 et. seq. (A.A.C.) and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the A.A.C. All terms and conditions in this permit are enforceable by the Administrator of the U.S. Environmental Protection Agency.

TABLE OF CONTENTS

ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 1000605
for
BHP Copper, Pinto Valley Unit

I. PERMIT EXPIRATION AND RENEWAL

[A.R.S. § 49-426.F, A.A.C. R18-2-304.C.2, 306.A.1, and 322]

A. This permit is valid for a period of five years from the date of issuance of the permit.

B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

[A.A.C. R18-2-306.A.8.a. and b, A.R.S. § 49-463, and A.R.S. §49-464]

A. The Permittee shall comply with all the conditions contained in Attachments "A" and "B" of this permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act (Act).

B. Need to halt or reduce activity not a defense. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

[A.A.C. R18-2-306.A.8.c and 321.A]

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. The permit shall be reopened and revised under any of the following circumstances:

1. Additional applicable requirements under the Act become applicable to the Class I source. Such reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to R18-2-322(B). Any permit revision required pursuant to this subparagraph shall comply with provisions in R18-2-322 for permit renewal and shall reset the five year permit term.

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.

3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under paragraph 1 above, affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in paragraph III.B.1 of this Attachment shall not result in a resetting of the five year permit term.

IV. POSTING OF PERMIT [A.A.C. R18-2-315]

Permittee shall post this permit, or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by the permit shall be clearly marked with one of the following:

A. Current permit number.

B. Serial number or other equipment number that is also listed in the permit to identify that piece of equipment.

C. A copy of the complete permit shall be kept on the site.

V. FEE PAYMENT [A.A.C. R18-2-326 and 306.A.9.]

Permittee shall pay fees to the Director pursuant to A.R.S. § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE [A.A.C. R18-2-327]

A. Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.

B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

A. Permittee shall submit a compliance certification to the Director twice each year, which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than April 15th, and shall report the compliance status of the source during the period between September 16th of the previous year, and March 15th of the current year. The second certification shall be submitted no later than October 15th, and shall report the compliance status of the source during the period between March 16th and September 15th of the current year. [A.A.C. R18-2-309.2.a]

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification; [A.A.C. R18-2-309.2.c.i]

2. Compliance status with each applicable requirement; [A.A.C. R18-2-309.2.c.ii]

3. Whether compliance was based on continuous or intermittent data;

[A.A.C. R18-2-309.2.c.iii]

4. Each deviation and take it into account in the compliance certification;
[40 CFR §70.6.c.5.iii.C]

5. Any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;
[40 CFR §70.6.c.5.iii.B]

6. Method(s) used for determining the compliance status of the source, currently and over the reporting period; [A.A.C. R18-2-309.2.c.iv]

7. A progress report on all outstanding compliance schedules submitted pursuant to Section XII.D of this Attachment. Progress reports submitted with compliance certifications satisfy the reporting requirements of A.A.C. R18-2-309.5.d. [A.A.C. R18-2-309.5.d]

B. A copy of all compliance certifications for Class I permits shall also be submitted to the EPA Administrator. [A.A.C. R18-2-309.2.d]

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

[A.A.C. R18-2-309.3]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY

[A.A.C. R18-2-309.4]

The Permittee shall allow the Director or the authorized representative of the Director upon presentation of proper credentials to:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;

B. Have access to and copy, at reasonable times, any records that are required to be kept

under the conditions of the permit;

C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

If this source becomes subject to a standard promulgated by the Administrator pursuant to section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard. [A.A.C. R18-2-304.C]

XI. ACCIDENTAL RELEASE PROGRAM

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the timeline specified in 40 CFR Part 68.

[40 CFR 68]

XII. REPORTING OF EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCIES

A. EXCESS EMISSIONS REPORTING [A.A.C R18-2-310.C]

1. Excess emissions, as defined in A.A.C. R18-2-101.37, shall be reported as follows:

a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

i. Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of

excess emissions including all available information from paragraph b. of this subsection.

ii. Detailed written notification within 72 hours of the notification pursuant to subparagraph (1) of this paragraph.

b. Report shall contain the following information:

i. Identity of each stack or other emission point where the excess emissions occurred.

ii. Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions.

iii. Date, time and duration or expected duration of the excess emissions.

iv. Identity of the equipment from which the excess emissions emanated.

v. Nature and cause of such emissions.

vi. If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions.

vii. Steps taken to limit the excess emissions.

2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to subsection A.1.a.(2) of this Section.

[A.A.C. R18-2-310.D]

3. It shall be the burden of the Permittee to demonstrate, through submission of the data and information required by Section XII.A of Attachment "A", that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of excess emissions.

[A.A.C. R18-2-310.B]

B. PERMIT DEVIATIONS REPORTING [A.A.C. R18-2-306.A.5]

1. Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time the deviation occurred.

2. All instances of deviations from permit requirements shall be clearly identified in the required semiannual monitoring report specified in Attachment "B", Section I.B, and shall be certified by the responsible official.

[A.A.C. R18-2-306.A.5.a]

C. EMERGENCY PROVISION [A.A.C. R18-2-306.E]

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

   a. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of paragraph (c) of this subsection are met.

   b. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant

evidence that:

i. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

ii. The permitted facility was at the time being properly operated;

iii. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

iv. The permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

c. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

d. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

[A.R.S. 49-426.I.5]

XIII. RECORD KEEPING REQUIREMENTS

[A.A.C. R18-2-306.A.4]

A. Permittee shall keep records of all required monitoring information including, but not limited to, the following:

1. The date, place as defined in the permit, and time of sampling or measurements;

2. The date(s) analyses were performed;

3. The name of the company or entity that performed the analyses;

4. A description of the analytical techniques or methods used;

5. The results of such analyses; and

6. The operating conditions as existing at the time of sampling or measurement.

B. Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

XIV. REPORTING REQUIREMENTS

[A.A.C. R18-2-306.A.5.a]

Permittee shall submit the following reports :

A. Compliance certifications in accordance with Section VII of Attachment "A".
B. Reports of excess emissions, permit deviations, and emergencies in accordance with Section XII of Attachment "A".
C. Other reports required by Section I.B of Attachment "B".

XV. DUTY TO PROVIDE INFORMATION

[A.A.C. R18-2-304.G and 306.A.8.e]

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION [A.A.C. R18-2-318, 319 and 320]

Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

A. Administrative Permit Amendment (A.A.C. R18-2-318);

B. Minor Permit Revision (A.A.C. R18-2-319);

C. Significant Permit Revision (A.A.C. R18-2-320).

The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT PERMIT REVISION [A.A.C. R18-2-317]

A. Permittee may make changes at the permitted source without a permit revision if all of the following apply:

1. The changes are not modifications under any provision of Title I of the Act or under A.R.S. § 49-401.01(17).

2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions.

3. The changes do not violate any applicable requirements or trigger any additional applicable requirements.

4. The changes satisfy all requirements for a minor permit revision under R18-2-319(A).

5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of subsections (A) and (C) of this Section.

C. For each such change under subsections A and B of this Section, a written notice by certified mail or hand delivery shall be received by the Director and, for Class I permits, the Administrator, a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change as possible or, if advance notification is not practicable, as soon after the change as possible. Each notification shall include:

1. When the proposed change will occur.

2. A description of each such change.
3. Any change in emissions of regulated air pollutants.

4. The pollutants emitted subject to the emissions trade, if any.

5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade.

6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply.

7. Any permit term or condition that is no longer applicable as a result of the change.

XVIII. PERFORMANCE TESTING REQUIREMENTS [A.A.C.R18-2-312]

A. Operational Conditions During Performance Testing

Performance tests shall be conducted during operation at the full load of the unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

B. Performance tests shall be conducted and data reduced in accordance with the test method and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

C. Performance Test Plan

At least 14 calendar days prior to performing a test, the owner or operator shall submit a test plan to the Director, in accordance with the Arizona Testing Manual. This test plan must include among others identified in the Arizona Testing Manual the following:

1. test duration;
2. test location(s);
3. test method(s); and
4. source operation and other parameters that may affect test results.

D. Stack Sampling Facilities

Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platforms;
3. Safe access to sampling platforms; and
4. Utilities for sampling and testing equipment.

E. Interpretation of Final Results

Each performance test shall consist of three separate runs using the required test method. Each run shall be conducted in accordance with the applicable standard and test method. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. If a sample is accidentally lost or conditions occur which are not under the Permittee's control and which may invalidate the run, compliance may, upon the Director's approval, be determined using the arithmetic mean of the other two runs. If the Director, or Director's designee, is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes, forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions or other conditions

beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation which demonstrates good cause must be submitted.

F. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS [A.A.C. R18-2-306.A.8.d]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XX. SEVERABILITY CLAUSE [A.A.C. R18-2-306.A.7]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

XXI. PERMIT SHIELD [A.A.C. R18-2-325]

Compliance with the conditions of this permit shall be deemed compliance with the applicable requirements identified in this permit. The permit shield shall not apply to any changes made pursuant to Section XVI.B of this Attachment and Section XVII of this Attachment.

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 1000605
for
BHP Copper, Pinto Valley Unit

I. Facility Wide Requirements

A. Upon issuance of the permit and as long as the property is in a care and maintenance mode, the owner or operator shall have available within a four hour time period, a person that is certified in EPA Reference Method 9. [A.A.C. R18-2-306.A.3]

B. Within 180 days of resumption of operations, the owner or operator shall have on site a person that is certified in EPA Reference Method 9. [A.A.C. R18-2-306.A.3]

C. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring activities required by this Attachment performed in the same six month period as applies to the compliance certification period. [A.A.C. R18-2-306.A.5.a]

II. Process Sources (Primary Crushing Unit, Fine Crushing Unit, Concentrator, and Moly Concentrate Drying Unit)

Particulate Matter and Opacity

A. Emission Limitations/Standards

Affected Facilities Subject to the Standards of Performance for Existing Nonferrous Metals Industry Sources *(Emission units identified as "Existing" in Attachment "C" of this permit)* shall comply with the following:

1. For all process sources, Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour in total quantities in excess of the amounts calculated by one of the following equation:

   a. For process sources having a process weight rate of 60,000 pounds

per hour (30 ton per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 3.59P^{0.62}$$

where:
E = the maximum allowable particulate emissions rate in pounds-mass per hour.
P = the process weight rate in tons-mass per hour

b. For process sources having a process weight rate greater than 60,000 pounds per hour (30 ton per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 17.31P^{0.16}$$

where "E" and "P" are defined as indicated in paragraph (i) of this subsection.

[Arizona State Implementation Plan R9-3-521.A.2]

2. While applying the process weight rate equation, Permittee shall utilize the total process weight from all similar units employing a similar type process to determine the maximum allowable emissions of particulate matter. [A.A.C. R18-2-721.D]

3. Permittee shall not cause, allow or permit to be emitted into the atmosphere, any plume or effluent which exceeds 40% opacity as measured by EPA Reference Method 9. [A.A.C. R18-2-702.B]

B. Air Pollution Controls

1. Wet scrubbers shall be operated to control emissions from the primary crushing unit, coarse ore feed, secondary and tertiary crushing unit, milling unit, and the moly concentrate drying unit.

2. Water sprays shall be operated to control emissions from the primary crushing unit and fine crushing plant.

[A.A.C. R18-2-331.A.3.e]

[Material permit conditions are identified by underline]

C. Monitoring, Reporting, and Recordkeeping

Affected Facilities Subject to the Standards of Performance for Existing Nonferrous Metals Industry Sources *(Emission units identified as "Existing" in Attachment "C" of this permit)* shall comply with the following:

1. Permittee shall install, calibrate, maintain, and operate monitoring devices which can be used to determine daily the material throughputs to individual process sources. [A.A.C. R18-2-306.A.3.b & A.A.C. R18-2-331.A.3.c]
[Material permit conditions are identified by underline]

2. Permittee shall record the daily process rates of all material handling facilities. [A.A.C. R18-2-721.F & A.A.C. R18-2-306.A.3.b]

3. Bi-weekly Monitoring for stack emissions from process sources

   a. Within 180 days of issuance of this permit, Permittee shall conduct certified Method 9 performance tests in accordance with Section XVIII of Attachment A for all the stacks associated with the process sources in the facility, while operating at normal representative working conditions, to establish a baseline opacity level for each of the stacks. Within 30 days of establishing the baseline opacity, the Permittee shall report the results to the Director.

   b. A certified Method 9 observer shall conduct a bi-weekly (once in two weeks) visual survey of visible emissions from the stacks associated with the process sources covered by this section when they are in operation. Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.

   c. If the observer sees a plume that on an instantaneous basis appears to exceed the baseline opacity level, then the observer shall, if practicable, take a six-minute Method 9 observation of the plume.

   d. If the six-minute opacity of the plume is less than the baseline opacity level, the observer shall make a record of the following:
      i. Location, date, and time of the observation; and

ii The results of the Method 9 observation.

e. If the six-minute opacity of the plume exceeds the baseline opacity level but is less than the applicable opacity standard, Permittee shall adjust or repair the controls or equipment to reduce opacity to or below the baseline opacity level. The observer shall make a record of the following:

i. Location, date, and time of the observation;
ii The results of the Method 9 observation;
iii. Date and time when corrective action was taken; and
iv Type of corrective action taken.

f. If the six-minute opacity of the plume exceeds the applicable opacity standard, then the Permittee shall do the following:

i. Adjust or repair the controls or equipment to reduce opacity to or below the baseline level; and
ii Report it as an excess emission for opacity.

g. If corrective actions fail to reduce opacity to or below the baseline level, the Permittee shall adopt the following course of action:

i. document all corrective action taken; and
ii initiate procedures to re-establish the baseline within 48 hours in accordance with subsection h.

h. If necessitated by the results of the bi-weekly monitoring, Permittee may reestablish the baseline opacity level(s). Reestablishment of the baseline(s) shall be performed utilizing the same procedures used in setting up the initial baseline level(s). Within 30 days of re-establishing the baseline opacity, the Permittee shall report the results to the Director. The report shall also contain a description of the need for re-establishing the baseline(s).

[A.A.C. R18-2-306.A.3.b]

4. Bi-weekly monitoring for fugitive emissions from process sources

a. A certified Method 9 observer shall conduct a bi-weekly (once in two weeks) visual survey of fugitive emissions from all the process sources covered by this section when they are in operation.

b. If the observer, during the visual survey, does not see any plume from any fugitive source that on an instantaneous basis appears to exceed the applicable opacity standard, then the observer shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.

c. If the observer sees a plume from a fugitive source that on an instantaneous basis appears to exceed the applicable opacity standard, then the observer shall if practicable take a six-minute Method 9 observation of the plume.

d. If the six-minute opacity of the plume exceeds the applicable opacity standard, Permittee shall do the following:

i. Adjust or repair the controls or equipment to reduce opacity to below the opacity standard;
ii. Report it as excess emissions.

e. If the six-minute opacity of the plume is less than the applicable opacity standard, the observer shall make a record of the following:

i. Location, date, and time of the observation; and
ii. The results of the Method 9 observation.

[A.A.C. R18-2-306.A.3.b]

D. Testing

1. Performance testing for Particulate Matter

a. Permittee shall conduct performance tests for particulate matter on all air pollution control devices associated with the process sources in the facility (as identified below) over the course of the permit term.

First year:	Primary crushing unit- 15DC01 and 21DC01-1A
Second year:	Fine Crushing Plant- 22DC01-1A through 22DC05-1A

Third year: Concentrator- 23DC01-1A and two representative stacks from 23DC02-1A through 23DC07-1A
Fourth year: Moly drying Unit

b. If the facility is not operative in a certain year, testing scheduled for that year shall be performed in the subsequent year within the permit term when the facility resumes operation.

[A.A.C. R18-2-312.G and A.A.C. R18-2-306.A.2]

2. Performance test for Opacity

In addition to the periodic monitoring required by Section II.C.3 of this attachment, Permittee shall conduct an annual performance test for opacity on each of the wet scrubbers covered by this section. These performance tests shall be conducted in accordance with Reference Method 9 in 40 CFR 60, Appendix A. [A.A.C. R18-2-312.G and A.A.C. R18-2-306.A.3.b]

E. Permit Shield

Compliance with the conditions of this part shall be deemed compliance with Arizona State Implementation Plan R9-3-521.A.2, A.A.C. R18-2-721.D, A.A.C. R18-2-721.F, A.A.C. R18-2-702.B, 40 C.F.R. 60.382.a(1), and 40 C.F.R. 60.382.a(2). [A.A.C. R18-2-325]

III. Boilers (WOFD boilers [1500 and 2750] and Moly Boiler)

A. Fuel Limitation

Permittee shall only burn Diesel, fuel oil #2, natural gas or propane in the boilers.

[A.A.C. R18-2-306.A.2]

B. Opacity Standards

1. Emission Limitations/Standards

Permittee shall not cause, allow or permit to be emitted to the atmosphere, any effluent which exceeds 15% opacity. [A.A.C. R18-2-724.J]

2. Monitoring, Reporting, and Recordkeeping

a. A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the stacks of the boilers. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The results of the Method 9 observation shall be maintained. [A.A.C. R18-2-306.A.3.b]

b. Permittee shall report all 6-minute periods during which the visible emissions exceeds 15% opacity. [A.A.C. R18-2-724.J]

3. Permit Shield

Compliance with the conditions of this part shall be deemed compliance with A.A.C.R18-2-724.J. [A.A.C. R18-2-325]

C. Particulate Matter

1. Emission Limitations/Standards

Permittee shall not cause, allow or permit the emission of particulate matter, caused by the combustion of fuel in excess of the amount calculated by the following equation:

$E = 1.02\ Q\ 0^{.769}$ where:

E = the maximum allowable particulate emissions rate in pounds mass per hour.
Q = the heat input in million Btu per hour. [A.A.C. R18-2-724.C.1]

2. Monitoring, Reporting, and Recordkeeping

When Diesel or fuel oil # 2 is fired in the boilers, Permittee shall maintain a record of the daily lower heating value of the fuel fired in the boilers. This may be accomplished by maintaining on record a copy of that part of the contract with the vendor that specifies the lower heating value of the fuel. [A.A.C. R18-2-306.A.3.b]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-724.C.1. [A.A.C. R18-2-325]

D. Sulfur Dioxide

1. Emission Limitations/Standards

a. Permittee shall not emit or cause to emit more than 1.0 pound of sulfur dioxide per million Btu heat input when low sulfur oil is fired. [A.A.C. R18-2-724.E]

b. Permittee shall not fire high sulfur oil (greater than 0.9% sulfur) in the boilers. [A.A.C. R18-2-724.G]

2. Monitoring, Reporting, and Recordkeeping

Permittee shall keep records of fuel supplier certification including the following information:

a. The name of the diesel supplier;
b. The heating value of diesel;
c. The density of diesel;
d. The sulfur content of diesel from which the shipment came; and
e. The method used to determine the sulfur content of diesel.

[A.A.C. R18-2-306.A.3.b]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-724.E and A.A.C. R18-2-724.G. [A.A.C. R18-2-325]

IV. Solvent Extraction and Electrowinning Process (SX/EW) & Miscellaneous Storage Tanks

A. Volatile Organic Compounds and Sulfuric Acid Mist

1. Emission Limitations/Standards

a. Permittee shall not cause the emission of gaseous or odorous materials from equipment and operations associated with the SX/EW process in such quantities or concentrations as to cause air pollution. [A.A.C. R18-2-730.D]

b. Materials including solvents or other volatile compounds, acids, and alkalis utilized in the SX/EW process shall be processed, stored, used, and transported in such a manner and by such means that they will not evaporate, leak, escape or otherwise be discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage, or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [A.A.C. R18-2-730.F]

c. Where a stack, vent or other outlet is at such a level that fumes, gas, mist, odor, smoke, vapor, or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to the adjoining property. [A.A.C. R18-2-730.G]

d. Permittee shall not allow sodium cyanide dust or dust from any other solid cyanide from any location in such manner and amount that the concentration of such emissions into the ambient air at any occupied place beyond the premises on which the source is located exceeds 140 micrograms per cubic meter for any averaging period of eight hours. [A.A.C. R18-2-730.K]

2. Air Pollution Controls

The following conditions are material permit conditions in accordance with A.A.C. R18-2-331.A.3.e.

Permittee shall use the following methods to control emissions:

a. Use a low vapor pressure diluent or other effective means of controlling VOC emissions as approved by the Director in the Solvent extraction plant;

b. In the Electrowinning tankhouse:

i. Foam;
ii. Blankets;
iii. Surfactants;
iv. Thermal retention balls; or
v. Other effective means of controlling sulfuric acid emissions as approved by the Director.

3. Monitoring, Reporting, and Recordkeeping

Permittee shall maintain a record of the control measures used to limit emissions from the SX/EW process. [A.A.C. R18-2-306.A.3.b]

4. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.D, A.A.C. R18-2-730.F, A.A.C R18-2-730.G, A.A.C. R18-2-730.H and A.A.C. R18-2-730.K. [A.A.C. R18-2-325]

V. Non-Point Sources

A. Open Areas, Roadways and Streets, Material Handling, Storage Piles, and Mineral Tailings

1. Opacity and Particulate Matter Standards

a. Emission Limitations/Standards

(1) Permittee shall not cause, allow or permit visible emissions from open areas, roadways and streets, storage piles or material handling in excess of 40 % opacity measured in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C.R18-2-610]

(2) Permittee shall employ at least one of the following reasonable precautions, or any other method as proposed by the Permittee and approved by the Director (following compliance with any applicable air permit revision mechanism), to prevent excessive amounts of particulate matter from becoming airborne:

(a) Use dust suppressants or soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, or barring access when constructing, using, altering, repairing, demolishing, clearing, or leveling a building or its appurtenances, a driveway, a parking area, or a vacant lot, or when moving or excavating earth.

In addition to the above, the following have been identified as reasonable precautions:

Applying wetting agents, stemming, optimizing blast pattern, controlling oxygen balance of explosives during blast operations, minimize material drop height, temporary paving, road cover, controlling vehicle access, limiting vehicle speed, revegetation, hydro-seeding, hydro-mulching, mulching, wet sweeping, vacuuming, wind fence, wind break, shrouding, skirting, enclosing, contouring, animals, soil adhesives, compaction, agglomeration, inherent moisture content, and encrustation.

[A.A.C.R18-2-604.A]

(b) Apply temporary paving, dust suppressants, wetting down, or detouring when using, repairing, constructing or reconstructing a roadway.

In addition to the above, the following have been identified as reasonable precautions:

Applying wetting agents, controlling vehicle access, limiting vehicle speed, revegetation, hydro-seeding, hydro-mulching, mulching, landscaping, wet sweeping,

vacuum, wind fence, wind break, covering, contouring, usage of soil adhesives, usage of soil stabilizers, compaction, usage of decomposed granite, agglomeration, inherent moisture content, and encrustation.

[A.A.C.R18-2-605.A]

(c) Apply dust suppressants, wetting, or cover the load when transporting materials likely to give rise to airborne dust.

In addition to the above, the following have been identified as reasonable precautions:

Applying wetting agents, minimizing material drop height, limiting vehicle speed, wind break, covering, agglomeration, inherent moisture content and encrustation.

[A.A.C.R18-2-605.B]

(d) Use spray bars, wetting, wetting agents, dustsuppressants, covers, or hoods when crushing, screening, handling, transporting, or conveying material that is likely to result in significant amounts of airborne dust;

In addition to the above, the following have been identified as reasonable precautions:

Minimizing material drop height, wind fence, wind break, shrouding, skirting, enclosing, contouring, inherent moisture content and agglomeration.

[A.A.C.R18-2-606]

(d) Use chemical stabilization, wetting, or covering when stacking, piling or otherwise storing organic or inorganic dust-producing material

In addition to the above, the following have been identified as reasonable precautions:

Wind fence, wind break, shrouding, skirting, enclosing, covering, contouring, agglomeration, inherent moisture content and encrustation.

[A.A.C.R18-2-607.A]

(e) Operate stacking and reclaiming machinery utilized at storage piles at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents;

In addition to the above, the following have been identified as reasonable precautions:

Wetting, wind fence, wind break, shrouding, skirting, enclosing, covering, contouring, inherent moisture content and agglomeration.

[A.A.C.R18-2-607.B]

(f) Use wetting, chemical stabilization, or revegetation when constructing mineral tailing piles;

In addition to the above, the following have been identified as reasonable precautions:

Applying wetting agents, maximizing the wet surface area, barring or controlling vehicle access, limiting vehicle speed, hydro-seeding, hydro-mulching, mulching, landscaping, wind fence, wind break, covering, contouring, animals, soil adhesives, soil stabilizers, compaction, usage of decomposed granite, agglomeration, inherent moisture content, and encrustation.

[A.A.C. R18-2-608]

(g) Use wetting agents or dust suppressants before the cleaning of any site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means;

In addition to the above, the following have been identified as reasonable precautions:

Wetting, chip seal, gravel, temporary paving, controlling vehicle access, limiting vehicle speed, revegetation, inherent moisture content, and hydro-seeding.

[A.A.C.R18-2-804.B]

b. Monitoring, Reporting, and Recordkeeping Requirements

[A.A.C R18-2-306.A.3.b]

(1) Permittee shall maintain records of the dates on which any of the activities listed in Condition V.A.1.a.(2)(a) through (g) of this Attachment were performed and control measures employed.

(2) In lieu of Condition V.A.1.(b).(1), the Permittee may maintain a Non-Point Source Monitoring Plan as a means of monitoring and recordkeeping for any of the activities listed in Condition V.A.1.a.(2)(a) through (g) of this Attachment.

(a) If the Non-Point Source Monitoring Plan has not been submitted to the Director as part of the Class I application form, the Permittee may submit a significant revision pursuant to A.A.C. R18-2-320 stating an intent to rely on a Non-Point Source Monitoring Plan. The Non-Point Source Monitoring Plan shall be submitted with the Significant Revision application.

(b) The Non-Point Source Monitoring Plan shall describe the methods the Permittee will use to comply with the requirements of this Section. The plan shall contain the following minimum elements of information :

i) Types of control measures employed on an activity-specific basis;
ii) Frequency of application of control measures;
iii) A system for documenting variations from the

strategy outlined in the Non-Pont Source Monitoring Plan

(c) If the Permittee relies on "inherent moisture content" as a reasonable precaution for minimizing particulate emissions caused by traffic over haul roads, the dates of the period for which this control measure was used shall be recorded.

(d) Permittee may add any method listed in Conditions V.A.1.a.(2)(a) through (g) to the list of control methods identified in the Non Point Source Monitoring Plan. Such changes to the plan shall be recorded, and a notification shall be sent to the Director within 10 days following the change. In addition, Permittee may add any method approved hereafter by the Director pursuant to Condition V.A.1.a.(2) to the list of control methods identified in the Non Point Source Monitoring Plan by complying with the applicable permitting mechanism if a permit revision is required, and in any other case by recording the change, and providing a notification to the Director within 10 days following the change.

(3) Bi-weekly Monitoring Requirement

(a) Within 90 days of issuance of this permit, Permittee shall submit a visual observation plan to be approved by the Department. The observation plan shall identify a central lookout station or multiple observation points, as appropriate, from where the non point sources shall be monitored. When multiple observation points are used, all the non point sources associated with each observation point shall be specifically identified within the observation plan.

(b) The certified Method 9 observer shall conduct a bi-weekly (once in two weeks) visual survey of visible emissions from the non-point sources when they are in

operation in accordance with the observation plan. Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.

(c) If the observer sees a plume from a non-point source that on an instantaneous basis appears to exceed 40%, then the observer, shall if practicable, take a six-minute Method 9 observation of the plume.

(d) If the six-minute opacity of the plume is less than 40%, the observer shall make a record of the following:

i) Location, date, and time of the observation; and
ii) The results of the Method 9 observation.

(e) If the six-minute opacity of the plume exceeds 40%, then the Permittee shall do the following:

i) Adjust or repair the controls or equipment to reduce opacity to below 40%; and
ii) Report it as an excess emission under Section XI.A of Attachment "A".

(f) Any changes to the observation plan, originally approved by the Department, shall be made only with the prior approval of the Director.

[A.A.C. R18-2-306.A.3.b]

d. Permit Shield

Compliance with the conditions of this part shall be deemed compliance with A.A.C. R18-2-610, A.A.C. R18-2-604.A, A.A.C. R18-2-605.A, A.A.C. R18-2-605.B, A.A.C. R18-2-607.A, A.A.C. R18-2-607.B, A.A.C. R18-2-608, and A.A.C. R18-2-804.B

[A.A.C. R18-2-325]

VI. Mobile Sources

The requirements of this section are applicable to mobile sources which either move while

emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or are agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.84. [A.A.C. R18-2-801]

Opacity Standards

A. Emission Limitations/Standards

Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40% opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [A.A.C. R18-2-804.A]

B. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-801 and A.A.C. R18-2-804.A. [A.A.C. R18-2-325]

VII. Other Periodic Activities

A. Use of Paints

1. Opacity of Visible Emissions

a. Emission Limitations/Standards

Visible emissions from spray painting operations shall not have an opacity greater than 40%, measured in accordance with by EPA Reference Method 9. [A.A.C. R18-2-702.B]

b. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C.R18-2-702.B. [A.A.C. R18-2-325]

2. Volatile Organic Compounds

a. Emission Limitations/Standards

While performing spray painting operations the Permittee shall comply with the following requirements:

i. The Permittee shall not conduct any spray painting operation without minimizing organic solvent emissions. Such operations other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray. [A.A.C.R18-2-727.A]

ii. The Permittee shall not either:

(a) Employ, apply, evaporate or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or
(b) Thin or dilute any architectural coating with a photochemically reactive solvent. [A.A.C.R18-2-727.B]

iii. For the purposes of parts (ii) and (v) of this condition, a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in paragraphs (a) through (c) of this subsection, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

(a) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation - hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones : five percent
(b) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: eight percent
(c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent [A.A.C.R18-2-727.C]

iv. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups or organic compounds described

in subsection iii(a) through iii(c) of this condition, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents.

[A.A.C.R18-2-727.D]

v. The Permittee shall not dispose by evaporation more than 1.5 gallons of photochemically reactive solvent in any one day.

[SIP Provision R9-3-527.C]

b. Monitoring, Recordkeeping, and Reporting Requirements

i. Each time a spray painting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

(a) The date the project was conducted;
(b) The duration of the project;
(c) Type of control measures employed; and
(d) Material Safety Data Sheets for all paints and solvents used in the project.

[A.A.C.R18-2-306.A.3.b]

ii. Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of part i above.

iii. In lieu of Condition VII.A.2.b.(i), the Permittee may maintain a section called "Spray Painting Plan" within the Non-Point Source Monitoring Plan referenced in Condition V.A.1.b.(2), (a) through (c). [A.A.C.R18-2-306.A.3.b]

c. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C.R18-2-727 and SIP Provision R9-3-527.C.

[A.A.C. R18-2-325]

B. Demolition/Renovation

1. Emission Limitations/Standards

The Permittee shall comply with the applicable requirements of 40 CFR 61, Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos). [A.A.C.R18-2-1101.A.8]

2. Monitoring, Recordkeeping, and Reporting Requirements

Permittee shall keep all required records in a file. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

C. Nonvehicle Air Conditioner Maintenance and/or Services

1. Emission Limitations/Standards

The Permittee shall comply with the applicable requirements of 40 CFR 82 - Subpart F (Protection of Stratospheric Ozone - Recycling and Emissions Reduction). [40 CFR 82, Subpart F]

2. Monitoring, Recordkeeping, and Reporting Requirements

Permittee shall keep all records required by the applicable requirements of 40 CFR 82 - Subpart F in a file.

D. Abrasive Blasting

1. Emission Limitations/Standards

a. Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 40% opacity as measured by EPA Reference Method 9. [A.A.C. R18-2-702.B]

b. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:

i. wet blasting;
ii. effective enclosures with necessary dust collecting equipment;

or

iii. any other method as approved by the Director.

[A.A.C. R18-2-726]

2. Monitoring, Recordkeeping, and Reporting Requirements

a. Each time an abrasive blasting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

i. The date the project was conducted;
ii. The duration of the project; and
iii. Type of control measures employed.

b. In lieu of Condition VII.D.2.a, the Permittee may maintain a section called "Abrasive Blasting Plan" within the Non-Point Source Monitoring Plan referenced in Condition V.A.1.b.(2), (a) through (c).

[A.A.C.R18-2-306.A.3.b]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C.R18-2-702.B and A.A.C.R18-2-726. [A.A.C. R18-2-325]

ATTACHMENT "C": EQUIPMENT LIST

Air Quality Control Permit No. 1000605
for
B.H.P. Copper, Pinto Valley Unit

Unit (Unit id as applicable)	Make/Model	Date of manufacture	Size/ Production Capacity	Unit ID/Serial No	New/ Existing
Primary Crushing Unit (associated air pollution controls: Wet scrubber 15 DC01, 21DC01-1A, 22DC03-1A, and water sprays)					
Primary crusher (15DC01)	Traylor	1974	4000 ton/hr	71-20489	Existing
Bin	N/A	1973	800 tons	N/A	Existing
Apron feeder	N/A	1974	4500 ton/hr	N/A	Existing
Primary crusher overland conveyor belt 1	Continental	1977	4000 ton/hr	N/A	Existing
6 pan feeders	N/A	1973	4500 ton/hr	N/A	Existing
Conveyor belt 2a, 2b, 2c (21DC01-1A)	Continental	1973	1500 ton/hr each	N/A	Existing
3 Tyrock screens (22DC03-1A)	Tyrock	1974	1500 ton/hr each	20338, 20339, 20340	Existing
Air Pollution Controls					
Wet scrubber (15DC01)	Krebs 60 gpm	N/A	11,500 acfm, 7" wg	N/A	N/A
Wet scrubber (21DC01-1A)	Ducon 150 gpm	N/A	29400 cfm	N/A	N/A
Wet scrubber (22DC01-1A)	Ducon 200 gpm	N/A	38400 cfm, 4" wg	N/A	N/A
Secondary and Tertiary Crushing Plant (associated air pollution controls: Wet scrubbers 22DC01-1A .. 22DC05-1A and water sprays)					
Cone crusher 1,2,3 (22DC03-1A)	Symons Noreberg	1980	4500 ton/hr	1-7717, 2-7718, 3-7719	Existing
Conveyor belts 3 (22DC05-1A)	Continental/ City Services	1980	5000 ton/hr	O7COV001	Existing
Conveyor belts 4 (22DC05-1A)	Continental/ City Services	1980	5000 ton/hr	O7COV002	Existing

Unit (Unit id as applicable)	Make/Model	Date of manufacture	Size/ Production Capacity	Unit ID/Serial No	New/ Existing
Conveyor belts 5 (22DC05-1A)	Continental/ City Services	1980	5000 ton/hr	O7COV003	Existing
Tripper car	N/A	1973	5349 ton/hr	N/A	Existing
Tertiary surge bin (22DC04-1A)	N/A	1974	2000 tons	N/A	Existing
Conveyor belts 6a, 6b, 6c (22DC01-1A)	N/A	1973	669 ton/hr each	N/A	Existing
Conveyor belts 6d, 6e, 6f (22DC02-1A)	N/A	1973	669 ton/hr each	N/A	Existing
6 screens (22DC01-1A and 22DC02-1A)	Tyler	1973	669 ton/hr each	N/A	
Cone crushers 4,5,6 (22DC01-1A)	Symons Noreberg	1980	3000 ton/hr	4-7720, 5-7721, 6-7722	Existing
Cone crushers 7,8,9 (22DC05-1A)	Symons Noreberg	1979	3000 ton/hr	7-7723, 8-7724, 9-7725	Existing
Conveyor belt 7	Continental	1990	4500 ton/hr	07COV004	Existing
Conveyor belt 8	Continental	1973	4500 ton/hr	07COV005	Existing
Tripper car	N/A	1973	4500 ton/hr	N/A	Existing
Air Pollution Controls:					
Wet scrubber (22DC01-1A)	Ducon 200 gpm	N/A	38400 cfm, 4" wg	N/A	N/A
Wet scrubber (22DC02-1A)	Ducon 200 gpm	N/A	38400 cfm, 4" wg	N/A	N/A
Wet scrubber (22DC03-1A)	Ducon 200 gpm	N/A	38400 cfm, 4" wg	N/A	N/A
Wet scrubber (22DC04-1A)	Ducon 150 gpm	N/A	29900 cfm, 4" wg	N/A	N/A
Wet scrubber (22DC05-1A)	Krebs 120 gpm	N/A	18500 cfm	N/A	N/A
Concentrator (associated air pollution controls: Wet scrubbers 23DC01-1A .. 23DC07-1A)					
Fine ore storage barn (23DC01-1A)	N/A	N/A	180,000 tons total storage	N/A	Existing
Feeder belts 1-12 (23DC02-1A... 23DC07-1A)	N/A	1974	500 ton/hr each	N/A	Existing

Unit (Unit id as applicable)	Make/Model	Date of manufacture	Size/ Production Capacity	Unit ID/Serial No	New/ Existing
Ball mill feed conveyors 1-6 (23DC02-1A.. 23DC07-1A)	N/A	1974	500 ton/hr each	N/A	Existing
Air Pollution Controls					
Wet scrubber (23DC01-1A)	Krebs 150 gpm	N/A	30000 cfm	N/A	N/A
Wet scrubber (23DC02-1A)	Fisher-Klosterman MS-300H	N/A	20" wc	N/A	N/A
Wet scrubber (23DC03-1A)	Fisher-Klosterman MS-300H	N/A	20" wc	N/A	N/A
Wet scrubber (23DC04-1A)	Fisher-Klosterman MS-300H	N/A	20" wc	N/A	N/A
Wet scrubber (23DC05-1A)	Fisher-Klosterman MS-300H	N/A	20" wc	N/A	N/A
Wet scrubber (23DC06-1A)	Fisher-Klosterman MS-300H	N/A	20" wc	N/A	N/A
Wet scrubber (23DC07-1A)	Fisher-Klosterman MS-300H	N/A	20" wc	N/A	N/A
Moly dryer (no associated air pollution controls)					
Moly dryer	N/A	N/A	1500 dry tons of moly concentrate per year	N/A	Existing
Fuel burning equipment					
Moly concentrate dryer boiler	First Thermal Systems	1994	64824 gallons of fuel oil per year	50-2-1 HHC	Existing
Mill change room boiler (WOFD 1500)	Patterson Kelly Co	1974	56064 gallons of fuel oil for both change room boilers combined	N/A	Existing
Mill change room boiler (WOFD 2750)	Patterson Kelly Co	1974		N/A	Existing
Miscellaneous storage tanks					
Holding tank- SXEW circuit			95200 gallons		N/A
Gunk tank- SXEW circuit			15200 gallons		N/A

Unit (Unit id as applicable)	Make/Model	Date of manufacture	Size/ Production Capacity	Unit ID/Serial No	New/ Existing
Solvent tank- PVO grease pit			350 gal		N/A
Grease tank- PVO grease pit			10000 gallons		N/A
Recirculation tank- PVO SXEW			13800 gallons		N/A
Xanthate tank- PVO mill top floor			500 gal		N/A
Froth tank- PVO mill top floor			500 gal		N/A
Holding tank- PVO mill top floor			500 gal		N/A
Moly collector tank- PVO mill top floor			500 gallons		N/A
Cu/moly concentrate tank- PVO moly mill					N/A
Copper concentrate tank- PVO copper thickener					N/A
Final product thickener- PVO mill					N/A
Surge tank- PVO mill			70000 gallons		N/A
Milk of lime tank- PVO lime plant			100000 gallons		N/A
Ammonium sulfide tank- PVO reagent building			9000 gallons		N/A
Cyanamide tank- PVO tail thickeners			6000 gallons		N/A
Slurry tank- PVO slurry pumphouse					N/A
Backwash tank- PVO SXEW			12700 gallons		N/A
Filterfeed tank- PVO SXEW			10100 gallons		N/A

Unit (Unit id as applicable)	Make/Model	Date of manufacture	Size/ Production Capacity	Unit ID/Serial No	New/ Existing
Electrolyte tank- PVO SXEW			13500 gallons		N/A
Liquid propane tank- PVO SXEW			1200 gallons		N/A
Acid tank- PVO SXEW			6000 gallons		N/A
Antifreeze tank- PVO grease tank			525 gallons		N/A
Dow froth tank- PVO mill top floor			500 gallons		N/A
Cu/moly concentrate- PVO moly mill					N/A
Storage tank (contents unknown)- PVO mill					N/A
Dow froth tank- PVO reagent building			500 gallons		N/A
Ammonia sulfide tank- PVO reagent building			9000 gallons		N/A
Oreprysx13 tank- PVO reagent building			9000 gallons		N/A
CY7025 tank- PVO reagent building			9000 gallons		N/A
Flotzol 150 tank- PVO reagent building			9000 gallons		N/A
Xanthate tank- PVO reagent building			9000 gallons		N/A
Caustic soda tank- PVO reagent building			6000 gallons		N/A
CY7025 soda tank- PVO reagent building			3000 gallons		N/A
Holdinng tank- PVO reagent building			3000 gallons		N/A
Xanthate tank- PVO reagent building			1700 gallons		N/A

Unit (Unit id as applicable)	Make/Model	Date of manufacture	Size/ Production Capacity	Unit ID/Serial No	New/ Existing
Sodium cyanide tank- PVO reagent building			1500 gallons		N/A
Dry lime storage tank- PVO lime plant					N/A
Concentrate storage tanks- PVO tail thickeners					N/A
Ammonium nitrate tank- old mill- sw energy			8000 gallons		N/A
Ammonium nitrate tank- old mill- sw energy			12000 gallons		N/A
Anhydrous ammonia tank- PVO above primary crusher			12000 gallons		N/A
Electrolyte filter tank- PVO SXEW			2100 gallons		N/A
Floc 852 tank- PVO tail thickeners			6500 gallons		N/A
Liquid nitrogen tank- PVO mill			16000 gallons		N/A
Anti-scalant tank- PVO slurry pumphouse			4000 gallons		N/A
Liquid propane tank- PVO shop site			1000 gallons		N/A
Slurry tank- PVO SXEW			1270 gallons		N/A
Aeroflote tank- PVO reagent building			9000 gallons		N/A
Caustic soda tank- PVO reagent building			9000 gallons		N/A
Antiscalant tank- PVO slurry pumphouse			6500 gallons		N/A
Liquid propane tank- PVO guard gate			250 gallons		N/A
Floc tank- PVO tail thickeners			5000 gallons		N/A

Unit (Unit id as applicable)	Make/Model	Date of manufacture	Size/ Production Capacity	Unit ID/Serial No	New/ Existing
Liquid propane tank- PVO mill			250 gallons		N/A
Anti-scalant tank- PVO mill			6500 gallons		N/A
Acid water tank- PVO R.O. tank			525 gallons		N/A
Acid water tank- PVO R.O. tank			500 gallons		N/A